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ALGONKIN METAL-SMITHS.

BY HENRY LEE REYNOLDS.

In a recent number of "Matériaux pour L'Histoire de L'Homme," M. Paul du Chatelier, an eminent French ethnologist, speaks with some assurance of the great antiquity of the ancient copper mines of Lake Superior, and attributes them, and, incidentally, the American mounds, to an unknown people distinct from and superior to the historic Indian.

This idea is very prevalent. Indeed it seems almost more commonly accepted than in the days when the discovery of these mines was first reported, when Indian copper was unknown, and speculation was thus more rife as to a higher order of people here in pre-Columbian times.

Dr. Charles T. Jackson, a prominent observer, who had early personal knowledge of these mines, and Dr. I. C. Lapham, who speaks of them in his "Antiquities of Wisconsin," did not, however, consider them of so great antiquity, and gave, furthermore, plausible reasons for thinking them to be the work of the natives known to the whites. Nevertheless, regardless of these opinions, men like Daniel Wilson and Col. Whittlesey, subsequently appeared in standard works, the one in his well-known "Prehistoric Man," the other in a monograph specially prepared upon this subject for the Smithsonian Institution, and, in a full review and discussion of this question, asserted their belief in the view now being promulgated by a host of writers like M. du Chatelier.

But the only evidence of any importance that is advanced to demonstrate the theory of great antiquity is, first, that the pits or excavations were well nigh filled with the decayed accumulations of time; secondly, that certain ancient trees were found growing upon the debris thrown out; and, thirdly, that no Indian tradition could be had in respect to them.

Now in depressions or excavations of this kind weather accumulations, particularly in this locality, must be considered very misleading. Dr. Thomas has told us at a previous meeting that it is also misleading to adopt the common idea about the ring growth

of trees in the determination of their age. Let us, nevertheless, assume it to be safe in this instance and the hemlock, with its 395 rings, that stood upon the debris would date from about the beginning of the sixteenth century—a period not very long prior to the time of the earliest French pioneers. This tree, however, according to the report, was not in the pit or excavation but upon the mound of debris that had been thrown out—a fact which, it is apparent, should not enter into the question as to the time at which the mines were abandoned.

Then again there is but little, if any, significance in the fact that certain Chippewa Indians who were questioned about these mines knew nothing about them. Traditions nowadays are the poorest and least considered data to which ethnologists resort. In justification whereof, and as bearing upon the present question, it should be said that important events are now known to have transpired in the histories of existing tribes of which no accounts seem ever to have been handed down.

It is not improbable, then, that the Lake Superior mines were worked by some of the Algonkin tribes during the fifteenth or sixteenth centuries.

Almost all the early French pioneers who entered the St. Lawrence river and penetrated the country to the Great Lakes and the Mississippi Valley, such as Cartier, Champlain, Allouez, and Membré, refer to the possession of wrought copper among the natives they encountered. So also do the navigators who first touched upon the Atlantic seaboard, beginning with Sebastian Cabot, and their testimony embraces every tribe dwelling at that time along the coast from Labrador to the Floridian peninsula.

In my examination of these authorities I have sought to ascribe the presence of copper in some instances to the visits of earlier voyagers, and, to do this thoroughly, I have prepared a list (thanks to the opportunities which the libraries of Congress and the Bureau of Ethnology afford) wherein is noted not only every record concerning copper, but also, in due order, every known voyage or expedition that came in contact with the natives in those days.

In this endeavor I was able to attribute, with more or less assurance, the copper found by some of the earliest navigators to the landing of others prior to their time. Likewise also the gold and silver that were mentioned as in the hands of the natives of the southern coast I found with certainty to have been originally ob-

tained from the numerous shipwrecks to which the narratives of Ribault, Laudonierre, and Bassanier refer.

But in spite of this result I satisfied myself that in a large majority of the instances reported the copper described was purely of aboriginal origin. In evidence of the correctness of this conclusion it should be said that the specimens now upon exhibition in our museums, which answer to the forms described by these chroniclers, are all composed of native copper. Such specimens, thus safely regarded as pre-Columbian, bear no evidence of any greater skill of fabrication than a patient beating with the aid of stone hammers, and, probably, stone moulds or swages. If melting was employed in the Blue Ridge Mountains, as is intimated by the early narratives, there is nothing to indicate that fact. No evidence of casting is known, and although some specimens, such as the beads of the cylindrical type, may be composed of copper that was first melted, they are so thin and small that the differences due to hammering upon the melted and unmelted metals cannot be detected.

Now the sources whence this aboriginal copper was obtained are, doubtless, three, namely: First, the float copper, found upon or near the surface in small lumps in the territory covered by the drift; secondly, the native copper found in the veins of the trap-rock of Lake Superior; and, thirdly, that abounding in the Blue Ridge Mountains.

Drift copper, it has been ascertained, has been picked up in an area of 70,000 square miles south of Lake Superior, embracing the States of Michigan, Wisconsin, Minnesota, Iowa, Illinois, Ohio, Indiana, and Missouri. Many instances, also, are known of its discovery in the States of New Jersey and Connecticut. Thus scattered, as they are, so abundantly over the land, these surface nuggets could have been readily discovered by the keen-eyed Indians while gathering the stones which they used.

There seems to be no good reason either why the same people could not have procured their copper from the Michigan mines, whose alleged antiquity has just been noticed. The Indian now is not what he was. In those days, when small bands of natives sojourned about the picturesque shores of Lake Superior to gather the copper which they prized, Necessity, the mother of all that was industrial and inventive among the aborigines, was patiently nourishing the development of American art; but, alas for the latter!

her European sister appeared from beyond the sea, and with the prowess acquired in a land of more emulative endeavor, she banished the mother from the American cradle and stunted the growth of her infant child. The American Indian, therefore, in those good days of pure aboriginal industry, was not the lazy, shiftless, and improvident being that the art of the European has made him. Labor and intelligence sufficient to work these mines he then possessed, and in proof of his authorship it should be said that nowhere about the mines or their vicinity can there be found a vestige of anything indicating a superior culture to that which he had attained. There is not an object found among the debris of the pits which has not a prototype in Indian art.

It may be urged in this connection that neither the early French adventurers nor the Indians with whom they conversed knew anything of such mines, but that they did, on the contrary, according to a story told Champlain, "gather it in lumps on the banks of a river near a great lake." Now, whether this refers to the drift lumps upon the surface or whether it is an incomplete reference to mining operations in the solid rock, the fact, nevertheless, remains that some of the Algonkins did, in those days, procure the copper which they wrought from Lake Superior, for it must have been the great lake referred to in the above quotation, and the river, on whose banks the metal was found, the Ontonagon. The wrought copper which Jacques Cartier saw must also have come from the same direction, for the natives informed him no less than five times that it came from a land called Saguenay, which, upon the authority of John G. Shea, was "evidently the Lake Superior region, and possibly the parts accessible by the Mississippi."

Another very probable source, and one to which no allusion has ever yet been made, is the Blue Ridge Mountains. Nothing of an archæologic character has yet been developed in that quarter, but since the old records point so unmistakably to it as the region from which the Southern Indian obtained the best part of the large quantity of copper that the white man found in his possession, it deserves, in my judgment, more than a passing notice. The language of the early narratives upon this point is as follows:

In the Gentlemen of Elvas' account of De Soto's adventurous expedition in 1540 it is stated that when he reached Chiaha the natives there informed him that "toward the north there was a province named Chisca, where there was a melting of copper, and

of another metal of the same color, save that it was finer and of a far more perfect color, and far better to the sight, and they used it not so much because it was softer. And the self-same thing was told the Governor in Cutifachiqui, where we saw some little hatchets of copper which were saide to have a mixture of gold." Now Chicha, it has been ascertained by several authorities, must have been upon or near the present site of Rome, Ga., thus making the province of Chisca, that lay to the north, correspond to the mountain district. The story is not improbable, for in the southern mountains of North Carolina nuggets of both copper and gold have repeatedly been found, and to-day rich mines of both metals are steadily worked in that section with all the facilities known to modern mining. De Soto sent on a force in search of these mines, but the Gentleman of Elvas does not say whether any were found or not. He describes, however, the country over which the Indian guides led these men, and this, according to their report, was very mountainous, and so difficult for their horses that it was impossible for the army to travel that way. It seems from the tenor of this report that their duty was to ascertain not so much the existence of mines as to learn whether or not that country was practicable for the passage of the army. Garcilaso's account, however, tells us a little more, namely, that after an absence of ten days they returned "and reported that the mines there produced very good copper, such as had been seen and referred to previously; and, moreover, they understood from the character of the country that they could not fail to find around there mines of gold and silver if the minerals and veins were examined. They further said that the country they passed through was excellent for pasture and tillage." All this is very true. Now it should be noted that although gold was also reported by the natives of Chiaha and Cutifachiqui to abound in these mountains the Spaniards, if they found any, do not reveal the fact, but the report of the natives concerning copper, however, is verified.

In 1561 Réné Laudonierre, the chronicler of the French colony in Florida, writes that "in the mountains of Appalatcy there are mines of copper which I think to be golde." The mountains of Appalatcy we know were the mountains of Northern Georgia and Western North Carolina.

Sir John Hawkins, who visited this French colony in 1564, says that "the French heard of no mines of gold or silver, but of copper they did."

Thomas Hariot, who was a member of the Roanoke colony in North Carolina, in 1586 prepared a report upon the commodities that were to be found in that country. "A hundred and fifty miles into the maine," he says, "in two townes we found with the inhabitants divers small plates of copper that had been made, as we understood, by the inhabitants that dwell further into the country, where, as they say, are mountains and rivers that yield also white graines of metall, which is to be deemed silver."

In Ralph Lane's account of the colony left under his charge upon the North Carolina coast in 1585 is the following description of a copper mine up the River Moratoc, which from the context, it seems to me, must have been the Roanoke: "That which made me most desirous to have some doings with the Mangoaks, either in friendship or otherwise, to have had one or two of them prisoners, was, for that it is a thing most notorious to all that countreye, that there is a province to which the saide Mangoaks have recourse and traffique up that river of Moratoc, which hath a marvelous and most strange minerall. This mine is so notorious amongst them as not only to the savages dwelling up the saide river, and also to the savages of Chawarook, and all of them to the westward, but also to all of them of the maine; the countrie's name is of fame and is called Chaunis Temoatan.

"The minerall, they say, is wassador, which is copper, but our copper is better than theirs; and the reason is for it is redder and harder, whereas that of Chaunis Temoatan is very soft and pale. They say that they take the saide metall out of the river that falleth very swift from hie rocks and hils, and they take it in shallow water; the manner is this: They take a great bowle, by their description as great as one of our targets, and wrappe a skinne over the hollow part thereof, leaving one part open to receive in the minerall; that done, they watch the comming downe of the current, and the change of the colour of the water, and then suddenly chop downe the said bowl with the skinne, and receive into the same as much oare as will come in, which is ever as much as their bowl will holde, which presently they cast into a fire, and foorthwith it meltheth, and doeth yielde in five parts at the first melting, two parts of metall for three parts of oare. Of this metall the Mangoaks have so great store, by report of all the savages adjoining, that they beautify their houses with great plates of the same. And this to be true I received by report of all the countrey, and particularly by young Skiko, the

king of Chawarook's sonne, my prisoner, who also himself had been prisoner with the Mangoaks, and set downe all the particulars to me before mentioned."

Mr. Bancroft in his history characterizes this as one of the tales by which a wily savage enticed Lane into the interior, where he and his men could be more easily destroyed. But this could scarcely be a mere trick or deception, since Lane asserts that the mine was "most notorious to all the countrey." Again, the "mine was so notorious amongst them, as not only to the savages dwelling up the saide river, and also to the savages of Chawarook, but also to them of the maine." And again he says that he received the report, not of young Skiko alone, but of all the countrey." The story therefore must have some foundation in fact; but in accepting it we must make allowances by considering, first, the difficulties the English experienced in accurately interpreting Indian reports, and, secondly, that Lane doubtless colored his story with reference to a softer and paler metal because he needed some plausible excuse for undertaking so disastrous an expedition. If we make no such allowance, however, we might ascribe this report of gold and smelting to the early Spanish diggings in Northern Georgia, which are now a matter of history. That these diggings antedated Lane's time is not improbable, for in 1560 it is known that Tristan de Luna inspired by the Spanish accounts of gold in that direction, penetrated almost to the valley of the Coosa, in Northern Georgia. He, in turn, was followed seven years later by Juan Pardo, who had instructions to proceed one hundred and sixty leagues inland "to establish a fort at the foot of the mountains northwest of Saint Augustine, in the province of the Chief Coabá." Northern Georgia corresponds as nearly as possible to the province of Chaunis Temoatan, described by distance and direction in Lane's account.

The question of early Spanish mining in these mountains has been fully discussed by Dr. D. G. Brinton in the Historical Magazine for May, 1866.

Richard Hakluyt, in his "Epistle Dedicatoree" to his translation of the Gentleman of Elvas' story, uses the following language, the dedication being to the Virginia council: "Master Thos. Hariot, a man of much judgment in these causes, signified unto you all, at your late solemne meeting, at the house of the right honourable, the Earle of Exeter, how, to the southwest of our old fort in Virginia, the Indians often informed him, that there was a great melt-

ing of red metall. Beside, our owne Indians have lately revealed either this or another rich mine of copper or gold in a towne called Ritanoe, in certain mountains lying west of Roanoke."

In Captain Newport's relation, which has been published by the American Antiquarian Society, in its fourth volume, there is a full description of his trip up the James river in 1607. Speaking of the Blue Ridge Mountains, he says: "Here our guide whispered with me that their caquassua (red stone or copper) was got in the bites of rocks and between cliffs in certain veins."

There is also published in this volume a narrative of the same expedition up the James by a member of the Jamestown colony: "Dinner done," he says, "we entered into a discourse of the river, how far it might be to the head thereof where they get their copper."

In the fourth volume of Purchas' Pilgrims, page 1784, in a chapter entitled "Virginian affaires since the yeere 1620 to this present, 1624," is the following: "The Indians have made relation of a copper mine that is not far from thence (referring to the settlement), how they gather it and the strange making of it—a piece whereof was sent home, being found (after triale) very excellent metall."

Farther on the same narrative says: "They report also of copper peeces presented to Opechancanough, which copper is gathered at the foote of the mountaines, where they dig a hole in the ground in which they put the oare, and make thereon a great fire, which causeth it to run into a masse, and become malleable. Neither have they any tooles but smooth stones for that purpose. This seemed strange to ours which heard the English copper passeth eleven fires."

William Strachey, in his narrative, speaking of "the high land to the westward," tells of a Weroance, or chief of that country called Eyanoco, who spared seven Englishmen, escaping from the Roanoke slaughter in 1586, "*to beat his copper*, of which he hath certaine mynes at the saide Ritanoe." Ritanoe, we have seen in a preceding extract, was in the mountains, and the copper obtained there, whether melted or not, was, according to this evidence, beaten, not cast. However, if the story about the preservation of the Englishmen be true, the probabilities are that the natives were afterwards taught, if they knew it not before, the effect of applying fire.

Strachey, further on, while speaking of the Virginia mountains,

says: "Herein are seated (say the Indians) those people whom Powhatan calls the Becootawanaucks, who (he saith) do likewise melt copper and other metals."

Now, Strachey believed, as he doubtless had good reason to do, Powhatan's story about the Becootawanauck copper, but he did not, it is evident, believe that they smelted it. In the following quotation from his last chapter he says: "And for copper, the hills of the Northwest have that stone as the people themselves remembered in the first chapter called the Becootawanaucks are saide to parte the solide metall from the stone without fire, bellowes, or additament, and beat it into plates, the like whereof is hardly found in any part of the world."

Although Strachey, in spite of Powhatan's story, has here denied to these mountain people the use of fire, still it may have been because he took the statement in the sense of smelting, which, judging from the language quoted above, he doubtless afterwards found good reason to discredit. The story, nevertheless, may refer to a melting of copper in its native state, which in Strachey's day could scarcely have been known. However this may be, hammering, at any rate, we see, formed a feature of its fabrication.

This is all the early records have to say concerning aboriginal mines along the Atlantic coast. They do not, it is seen, refer positively to the mining of any metal except copper, nor to the employment of any better means than those known to their more northern brethren. The unanimity with which they point to the mountains of North Carolina and Virginia as the territory from which it was obtained is sufficient assurance that Indian diggings did, in fact, exist there. Traces of these may yet, in time, be discovered. If none have as yet come to light, that fact need not discredit the idea, for that mountain country is a vast territory which is, as yet, too sparsely settled and too little explored.

I desire now to present some facts which seem to indicate active aboriginal mining operations subsequent to the appearance of the French in the Lake Superior region.

It is scarcely necessary for me here to refer to the numerous instances now upon record among the archives of the Smithsonian and kindred institutions of native copper specimens from the more recent and lower mounds, which were found associated with objects unquestionably European. With this fact, and many of the instances thereof, the gentlemen of this Society are already familiar. It was,

nevertheless, my intention to give the comparative number of specimens of this class, but other duties have not yet afforded me time to examine the Smithsonian collections, nor the reports of the many other collections in the country in reference to this particular inquiry. If I may be permitted, however, to speak upon the strength of a general and comprehensive study of the copper question for nearly a year and a half and a personal examination of all the large collections of copper relics in the country, this class of specimens about equals in number, if it does not actually exceed, the aggregate of all other specimens of native copper that have been found in mounds. In this estimate I include only such specimens which can be safely regarded as of native copper; all that are positively European and all of a doubtful origin being excluded. As to the doubtful ones, neither a magnifying glass nor chemical tests have, as yet, succeeded in determining whether the metal is native or refined.

But the best assurance of the later fabrication of our copper specimens is to be found in the fact that a vast quantity are found upon the surface, particularly in the States bordering upon Lake Superior, while an extremely small percentage have come from the numerous mounds existing in the same territory. I examined, last summer, two hundred and thirty-one copper specimens in the possession of the Public Museum at Milwaukee and two hundred more in the cases of the Wisconsin Historical Society at Madison. Not one was found in a mound, but all were either picked up from the surface or turned up with the sod in the cultivation of the field. Now these specimens, more or less exposed as they were to the action of the air, bear scarcely any indications of greater decomposition than the specimens found deep in the mounds. How can this be if they antedate the advent of the whites? They are mostly, if not all, implements, and all have been shaped out of native copper by patient hammering, doubtless with the assistance in some cases of stone moulds. Some are of such shape as to give rise to the suspicion that the workman must have attempted an imitation of some tool or weapon which he had seen in the hands of the French pioneers. The resemblance of the knives and chisels to European ones is very marked, while several of the spear-heads are indeed close copies of the old-fashioned French pike which must have been carried in those days in establishing the Jesuit missions. In proof of this I saw last summer, in Illinois, one of these old iron pike-heads which had been taken from a mound near by. It had the same three-sided or beveled

feature, formed by a slight ridge running through the center of one side, which is so often seen in our spear-heads of native copper. Many of these spear-heads also have sockets and a perforation for a rivet. Now it is hard to realize how these two ideas of a socket and a hole for a rivet, if they are not imitations, can predominate, as they do, over the simpler form of a tang or notch and the customary Indian method of fastening; for the Indian's first impulse in handling copper would be to imitate the types of spear-heads that he had already fashioned in stone. Then, too, the imitation of these types in stone would have been the simplest forms in the fabrication of copper; and the simplest must, in the natural order of things, be the first that occurs to the uninfluenced native mind. That this suspicion is well founded is demonstrated by the discovery of one of these socket spear-heads in which a broken rivet remained. This rivet proved to be iron. The specimen was plowed up in a Wisconsin field, and is described by Dr. J. D. Butler in the *American Antiquarian*, vol. iv, p. 232.

Indian wares, we know, by successive barter or by appropriation by right of war, traversed a vast and extensive territory; yet it must be noted that there is no continental distribution of this class of copper implements such as is observable in other objects of aboriginal art. They seem confined almost strictly to the territory reached by French influence, for in this limited area they outnumber by a surprising majority the aggregate of all specimens of a similar class, mound or surface, found elsewhere in the country.

Whatever may be said concerning the antiquity of such of the Lake Superior mining pits as have been explored, it is scarcely probable, if there are as many as are reported, that they were all worked at the same time. Investigations, therefore, as to the age of those which are unexplored or concerning whose age no report has been made may show more recent abandonment, if we admit the force of the argument as to the age of those explored.

But even these explored ones, it seems, bear evidences of having been worked with European steel; for, according to the report of Col. Chas. W. Whittlesey, the wooden shovels found in the débris have handles which appear to be shaped with a knife, and both the skids and copper, in certain instances, appear to have had the application of a sharp axe or chisel. Then, too, the wooden shovels, so called, that were sound in the rubbish do not deviate in any particular from the paddles which the Chippewas used for their canoes,

except that they are worn obliquely upon the blade, this being the result of their being put to duty as shovels in the mines.

Valuable testimony bearing upon the probability of these observations is furnished by Dr. P. R. Hoy, of Racine, Wis. This gentleman found in a grave in his State two crude pieces of mined copper together with two blue-glass beads of European make. These two lumps of copper had sharp angles and ridges, showing conclusively that they had been mined, for if they had been float copper they would have been more or less worn and rounded. But this is not all. Among other things associated with those two little European beads was also a copper lance-head, similar in type and fabrication to one gathered from the débris of the Keweenaw mines.

In the light of such facts as these, the question naturally arises, Were not the best part of the copper implements that have been found in Wisconsin, Michigan, and Illinois fabricated since the advent of the French? It does not seem to have occurred to the writers who describe such specimens that in those remote, unsettled parts of the country the Chippewas and Winnebagos could have possessed and worked native copper for many years without the fact being generally known. That this was the case, even up to as late as the second decade of the present century, is shown by the following extract from a letter of Satterlee Clark, who was the Indian agent for the Winnebagos from 1828 to 1830:

"When I first came among the Winnebagos many of them had copper-headed weapons. Many of them carried lances headed with copper. Masses of virgin copper were often scattered about, but particularly in the sand upon the beach of the Wisconsin. This was so pure and soft that it was no trouble to shape it to suit them."

This letter confirms so well the view that has been herein presented that with it I can afford to close.